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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,188	12/30/2003	Hideki Nakata	10873.1369US01	3394

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MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER

PSITOS, ARISTOTELIS M

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/751,188

Applicant(s)

NAKATA ET AL.

Examiner

Aristotelis M. Psitos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

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DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The IDS has been received and made of record.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations with respect to claims 9, 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be

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notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 10 is objected to because of the following informalities: The limitation finds no further support in the specification – as to how and what it is composed of. Appropriate correction is required.

Although the examiner does not introduce an insufficient disclosure rejection at the present time, absent an appropriate response/correction such will be introduced in any further communication.

As far as the claims recited positive limitations and as interpreted by the examiner, the following rejections are made.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1-7, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Chung et al (6442124).

Chung et al disclose a prism beam splitter arrangement having the four prisms with the three laser sources appropriately located as recited by independent claim 1. The optical film(s) are also located on the planar regions as required in order to yield the appropriate spot upon the desired record medium.

With respect to claim 2, such prism forms are so found.

With respect to claim 3, the films are so located.

With respect to claim 4, the wavelength ranges are depicted in the discussion with respect to the wavelength sources in the system.

With respect to claim 5, the optical axis is so found.

With respect to claims 6-7, the function(s) recited is/are present.

With respect to claim 11, the material composition of the prism is present.

2. Claims 1-7, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasman et al further considered with Chung et al.

The following analysis is made.

Claim 1.	Hasman et al
An optical head comprising:	yes – inherent in reference
First light source ---	see λ 1 – 4 for instance
Second light source ---	and disclosure thereof.
Third light source -----	Note figures 2/3
A beam splitter	see discussion of Dichroic beam splitter/prisms 38,41, 37, 40 in figure 3.
1 st , 2 nd , 3 rd , 4 th prisms	see first – third prisms in Hasman et al see 2 nd reference with respect to prism - Chung et al
1 st , 2 nd , 3 rd , 4 th films	see 2 nd reference Chung et al

The above Hasman et al reference discloses a multi wavelength optical rec/repr system. However, although there are three prisms, there is no specific teaching of having 4 prisms/hexahedral . Such is taught by the secondary reference to Chung et al.

It would have been obvious to modify the base system of Hasman et al with such additional teaching, motivation is to provide for a small footprint of the overall system.

With respect to claims 2,3,4,5 all such limitations are considered obvious in view of the overall combination of references, i.e., triangular/hexahedral beam splitter – prism – dichoric splitter/prism with appropriate films at the required planar positions in order to perform the overall splitting functions, as well as the wavelength selections.

With respect to the functional limitations of claims 6 and 7 such are considered met by the above combined teachings, the filer layers perform the desired functions upon the desired wavelengths in order to combine the incoming signals.

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With respect to claim 11, this is not interpreted as a manufacturing claim, i.e., merely a designation of materials of the beam-splitter, and such is present in the above combined teachings.

With respect to claim 13, such is disclosed in Hasman et al.

3. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 1 as stated in either paragraphs 1 or 2 above, and further in view of Official notice.

The use of the appropriate filter element in Dichroic beam splitting prism is considered well known in the art, and official notice is taken thereof. Furthermore, the shapes recited in claim 9 are also considered well known and official notice is taken of these limitations as well.

With respect to the placement of the film at the central portion of the beam-splitting device is concerned, since the teaching in the above combined references covers the entire plane incident to the incoming wavelength from the laser source, such a limitation is considered an optimization of systems parameter and obvious to one of ordinary skill in the art – see *In re Peterson* 65 USPQ2nd 1379.

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 1 as stated in either paragraphs 1 or 2 above, and further in view of themselves.

The examiner interprets this limitation as descriptive of the well-known aperture limiting abilities in the optical arts – i.e., limiting the beam diameter as required/desired for properly focusing upon the record medium. Such aperture limiting capabilities are considered well known and Official notice is taken thereof, i.e., such as beam-shaping prisms, anamorphic lens/prism.

The placement of an appropriate element upon a face of the beam-splitting device is considered obvious to one of ordinary skill in the art, i.e., for the further reduction of the overall footprint of the overall optical system.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 1 as stated in paragraphs 1 or 2 above, and further in view of Opheij.

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With respect to the limitation of this claim, Opheij teaches in this environment the ability of providing the collimator/ing lens integral with a prism.

It would have been obvious to modify the base system as relied upon above in either paragraphs 1 or 2 above with the additional teaching from Opheij, motivation is as discussed in Opheij.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 1 as stated in either paragraph 1 or 2 above, and further in view of Lee/Sugiura et al/Getreuer.

With respect to the limitations of claim 14, the ability of providing an appropriate incident surface for the function required is taught by any of the systems to Lee, Sugiura et al or Getreuer.

It would have been obvious to modify the base system as relied upon above with the above noted additional teaching, motivation is as discussed in these systems.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 1 as stated in paragraph 1 above, and further in view of Hasman et al.

With respect to the appropriate use/placement of the collimating lens as recited in this claim, such is taught by the Hasman et al reference.

It would have been obvious to modify the base system as relied upon above in paragraph 1 with the additional teaching from Hasman et al, for the reasons so discussed.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ju, Sugiura et al or Chung further considered with either Ando and Choi ('929, '206).

With respect to claim 15, Ju, Sugiura et al or Chung disclose prismatic beam splitter arrangements for multiple light sources, i.e., the recited 3 light sources.

With respect to using/limiting the prism to three – such is taught by Ando, see the discussion with respect to figures 6,7 or 10.

Furthermore, the arrangement of having two light sources having their optical axis parallel to each other in this environment is further taught by either Chung or either of the Choi systems.

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It would have been obvious to modify the base system of either Ju, Sugiura et al or Chung with the additional teachings from Ando and either of the Choi systems, so as to limit the amount of prisms needed/used, as well as the judicious location of the laser sources so as to reduce the number of elements, and over all foot print of the system.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Arai et al is cited as also illustrative of a multi-beam prismatic arrangement in this environment.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M. Psitos whose telephone number is (571) 272-7594. The examiner can normally be reached on M-F: 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Aristotelis M Psitos
Primary Examiner
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A handwritten signature in black ink, appearing to be 'AMP', with a long, sweeping horizontal stroke extending to the left.

AMP